Supplemental Materials

Aim 1: Self-Reported Sleep Duration and Aggression. A priori planned contrasts (linear, quadratic, and cubic) were used to examine effects of block on laboratory aggression over time as a function of **self-reported** sleep duration (i.e., sleep diary data), based on prior findings of quadratic effects of aggression across the experiment among aggressive participants (Verona et al., 2009). A Sleep Duration x Block (1-4; using linear, quadratic, and cubic polynomial contrasts) RMANOVA on average shock intensity scores revealed a quadratic effect of Block (shock intensity increased across the course of the experiment, peaking during middle blocks, and declining towards the end of the experiment; ($F(1,122)=6.00$, $p=.02$, $\eta_p^2=.05$)). There was also a Sleep Duration x quadratic Block interaction ($F(1,122)=4.46$, $p=.04$, $\eta_p^2=.04$), such that aggression was more pronounced in middle blocks at shorter sleep duration (Block 1 r: -.13, $p=.15$; Block 2 r: -.22, $p<.05$; Block 3 r: -.23, $p<.05$; Block 4 r: -.13, $p=.15$). Finally, there was a between-subjects effect of sleep duration on aggression, with shorter self-reported sleep duration associated with greater aggressive behavior on the task on average ($F(1,122)=4.82$, $p=.03$, $\eta_p^2=.04$). All remaining contrasts were non-significant. These results were consistent with the findings using objective sleep duration data.

Aim 2: Self-Reported Sleep Duration, Response Inhibition, and Emotional Processing. RMANOVAs were conducted examining Sleep Duration x Emotion Word Category (3) x Trial Type (2) on indices of motor inhibition (P3) and attentional inhibition (N2).

For the P3, the only significant interaction with self-reported sleep duration was a Sleep Duration x Emotion Arousal interaction ($F(1,108)=10.90$, $p=.001$, $\eta_p^2=.09$), whereas the Sleep Duration x Emotion Arousal x Trial Type interaction that was significant in objective sleep duration analyses only trended to significance ($F(1,108)=3.25$, $p=.07$, $\eta_p^2=.03$). Given our interest in examining correspondence of patterns of findings for subjective and objective

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measures of sleep duration, we decomposed the three-way interaction by conducting analyses within each emotion arousal condition to be consistent with the results of the main manuscript. There was a trending Sleep Duration x Trial Type interaction within neutral ($F(1,108)=2.92$, $p=.09$, $\eta_p^2=.03$), but not emotional ($F(1,108)=0.16$, $p=.69$, $\eta_p^2=.001$) words. Shorter self-reported sleep duration was related to less go/no-go differentiation during neutral blocks ($r=.11$, $p=.25$), relative to emotional blocks ($r=.04$, $p=.68$), although these simple effects were not significant. These results, albeit insignificant, are similar in pattern and size of effects to those identified with the objective sleep data.

Consistent with results using Fitbit data, for our index of attentional inhibition (parietal N2), a Sleep Duration x Emotion Word (3) x Trial Type (2) RMANOVA did not yield any significant results (all ps .07-.92; η_p^2s=.00-.03). RMANOVA analyses also revealed that sleep duration was not significantly associated with commission errors or reaction time overall or as a function of Emotion Word Category (all ps .07-.63; η_p^2s=.00-.03).

Aim 3: Explaining the Self-Reported Sleep-Aggression Relationship. Consistent with analyses in the original manuscript, bootstrapped path analyses revealed that none of the attentional/motor inhibition, emotional processing, or behavioral indices explained variance in the sleep diary duration -aggression relationship.

Additional Analyses. We conducted additional RMANOVA analyses to examine whether effects for Aims 1 and 2 were similar at parietal sites. No significant effects emerged at parietal sites, as shown in Table 1. We also report the detailed results for the indirect effect analyses from Aim 3 of the original manuscript in Table 2.

Supplementary Table 1. RMANOVA Results for Average Shock Intensity and parietal P3

Amplitude

Predictor	F	df	p	η_p^2	95% CI
Parietal Analyses (P3)					
Valence	0.36	(1,108)	.55	.00	[0.0, 0.06]
Arousal	1.10	(1,108)	.30	.01	[0.0, 0.08]
Trial Type	0.09	(1,108)	.77	.00	[0.0, 0.04]
Sleep Duration (Between Subjects)	3.38	(1,108)	.05	.03	[0.0, 0.11]
Valence x Sleep Duration	1.53	(1,108)	.22	.01	[0.0, 0.09]
Arousal x Sleep Duration	1.47	(1,108)	.23	.01	[0.0, 0.08]
Trial Type x Sleep Duration	0.84	(1,108)	.36	01	[0.0, 0.07]
Valence x Trial Type	0.32	(1,108)	.57	.00	[0.0, 0.05]
Arousal x Trial Type	0.00	(1,108)	.97	.00	[0.0, 0.02]
Valence x Trial Type x Sleep Duration	0.16	(1,108)	.69	.00	[0.0, 0.05]

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Supplementary Table 2. Indirect effects linking objective sleep duration with measures of aggressive behavior.

Indirect Effect	*B*(SE)	β	95% CI	*p*
Average Shock Intensity				
Response Inhibition				
Visual Attention (Par GNG N2)	0.00(0.00)	-.01	[-.04,.02]	.69
Motor (Fc GNG P3)	0.00(0.00)	-.01	[-.06,.02]	.75
Emotional Processing				
Arousal (Emotion vs. Neutral; FC P3)	0.00(0.00)	.01	[-.07, .10]	.81
Valence (Positive vs. Negative; FC P3)	0.00(0.00)	.00	[-.03, .04]	.81
Arousal (Emotion vs. Neutral; Par N2)	0.00(0.00)	.00	[-.03, .01]	.97
Valence (Positive vs. Negative; Par N2)	0.00(0.00)	-.003	[-.05, .02]	.83
Response Inhibition in Emotional Conditions				
Negative GNG (FC P3)	0.00(.00)	-.02	[-.08,.01]	.42
Positive GNG (FC P3)	0.00(.00)	.00	[-.03,.02]	.88
Neutral GNG (FC P3)	0.00(.00)	-.03	[-.11,.02]	.44
Arousal GNG (Emotion vs. Neutral GNG; FC P3)	0.00(.00)	.00	[-.001, .001]	.95
Valence GNG (Positive vs. Negative GNG; FC P3)	0.00(.001)	-.03	[-.09, .01]	.19
Negative GNG (Par N2)	0.00(0.00)	.01	[-.02, .06]	.65
Positive GNG (Par N2)	0.00(0.00)	-.002	[-.03, .02]	.85
Neutral GNG (Par N2)	0.00(0.00)	-.02	[-.09, .02]	.67
Arousal GNG (Emotion vs. Neutral GNG; Par N2)	0.00(0.00)	.01	[-.02, .05]	.52
Valence GNG (Positive vs. Negative GNG; Par N2)	0.00(0.00)	-0.01	[-.05, .03]	.73
Behavioral Indices				
Commission Errors	0.00(.00)	-.01	[-.06,.04]	.83
Reaction Time	0.00(.00)	.00	[-.02,.03]	.96
Behavioral Indices in Emotional Conditions				
Negative Commission Errors	0.00(.00)	.00	[-.06,.04]	.89
Neutral Commission Errors	0.00(.00)	-.01	[-.05,.02]	.70
Positive Commission Errors	0.00(.00)	-.01	[-.07,.03]	.87
Negative Reaction Time	0.00(.00)	.00	[-.02,.02]	.93
Neutral Reaction Time	0.00(.00)			.96
Positive Reaction Time	0.00(.00)	.00	[-.02,.02]	.98

Note. GNG = No-Go – Go trials. FC = Frontocentral, PAR = Parietal.